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ORIGINAL COMMUNICATIONS.

THE OPERATIVE TREATMENT OF PLEURAL EFFUSIONS.

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(Concluded from page 629.)

BUT a few words remain to be said in regard to the details of the operation itself. It is desirable that the skin should be anæsthetized by ether-spray or freezing with ice at the point where the puncture is to be made, and that a short incision be made through the derm, so that the puncture of the intercostal tissues may more surely be effected. Troussseau advised that the incision through the skin should not exactly correspond with the puncture of the intercostal tissues, so as to diminish the liability to the entrance of air; but this is rendered superfluous by the fact that the relations of the skin and intercostal spaces are much altered after the withdrawal of the distending fluid. The puncture must be made with a quick, fearless thrust, so as to avoid entangling the point of the trocar in the layers of false membrane which may line the pleura. The distance to which it is deemed safe to introduce the trocar may be regulated by the manner in which it is grasped in the hand.

I prefer operating with the patient in the sitting or half-sitting posture, and usually select as the point of puncture the sixth or seventh intercostal space, about in the line of the anterior border of the axilla. Of course, in the selection of this or any other spot, it is assumed that we have carefully determined that there is no adherence of the lung at the point, and that, if on the right side, there is no danger of wounding the liver. Authorities differ, however, widely in the point recommended for the puncture. Laennec recommended the fifth interspace, a little in front of the digitations of the serratus major, as being the most dependent point in the horizontal position, generally the freest from adhesions, and the seat of the greatest quantity of fluid. Walshe approves of this position, as do also Townsend and Stokes, who draw an analogical argument in favor of a high point, from the elevated position in which the discharge commonly occurs when it is spontaneous or preceded by the formation of an abscess. This latter point, however, is certainly mechanically unfavorable, and I confess myself unable to feel the force of this argument used by the distinguished writers I have mentioned. It is true, indeed, that when pyothorax discharges spontaneously externally, the point of perforation is apt to be near the mammary region, and much difference of opinion has existed as to the constancy with which this region is selected. It will appear, however, I think, that the true explanation is that the point of perforation will be determined by the

width of the intercostal spaces and the thinness or weakness of the thoracic walls. The entire surface of the thorax, in a case of extensive effusion, is subjected to hydrostatic pressure, and though in some instances there may be special determining causes, such as extreme softening of the pleura at certain spots, it seems probable that it is where the wall is weakest that this pressure gradually causes yielding and perforation. If this view be correct, it is evident that there is no special advantage in puncturing the chest so high up, except in cases of so-called "paracentesis of necessity," where the condition of the tissues warns us either that perforation of the intercostal tissues is about to take place or has actually occurred, with an escape of part of the thoracic contents into the subcutaneous cellular tissue. In such instances, no choice remains; it is preferable to perform paracentesis, and to choose a spot that will correspond with the point of spontaneous perforation. The following case illustrates this practical rule:

Case IV.—Empyema; threatened spontaneous evacuation—attempt to avert this by paracentesis; subsequent spontaneous perforation; pneumothorax; wasting purulent discharge from both openings; and death.

John G., æt. 35, a large and finely-developed man, applied for treatment at the Dispensary of the University of Pennsylvania. On examination it was found that there was a very extensive pleural effusion upon the right side, which was apparently of about eight months' duration. His general symptoms rendered it likely that it was, at least in part, purulent. An operation was proposed, but refused: internal treatment was directed, but upon his next visit there was slight redness over a spot in the fourth interspace, a little outside of the line of the right nipple. The tissues here were slightly infiltrated, and tender upon gentle pressure. Paracentesis was immediately performed, the trocar being introduced in the seventh interspace in the line of the axilla, and a large quantity of pus evacuated. The lung expanded fairly, and no pneumothorax followed. Unfortunately, ulceration of the pleura in the fourth interspace advanced, despite the relief of tension, and in a short time, when a moderate quantity of pus had reaccumulated, a spontaneous opening formed there, and discharged a small amount daily, but with the admission of air and establishment of pneumothorax. After this the case did badly; the pus became irritating in character, and the patient's position was such that, as he was unwilling to enter the hospital, it was impossible to use injections daily. The point where paracentesis had been performed also reopened; the tissues of the right thoracic walls became markedly infiltrated; the amount of purulent discharge continued quite large; cough with purulent expectoration came on, and the patient died from exhaustion. No autopsy was permitted.

Bowditch selects a point on the posterior aspect of the chest, in the eighth or even ninth interspace. A number of successful cases have been reported where the puncture was made at this part; but I confess to a feeling of insecurity in making the puncture so low down on the right side as the ninth interspace. An additional objection to this spot for the operation is, that in case it becomes necessary to insert and retain a canula, it causes great inconvenience to have it projecting on the back of the chest.

After the entire effusion, or so much of it as may be thought desirable, has been withdrawn, the canula is quickly removed, and a small pledget of lint placed on the point of puncture and fastened in place by a strip of adhesive plaster.

In cases where the effusion is found to be purulent, it has been advised by some operators not to attempt to close the opening, but immediately to introduce a bent canula, which is to be permanently retained in place. I would, however, strongly advise that after the first puncture in pyothorax the operation should be terminated just as if the effusion had been serous, since I have in several instances known a complete cure to ensue without any reaccumulation. It must be admitted, however, that such a result is the rare exception. When, therefore, it is found that the pus has again collected to a degree justifying paracentesis, it is preferable to employ a larger trocar, and at the close of the operation to introduce a silver canula of suitable size and shape, which may be permanently retained until the secretion of pus can be arrested.

Let me ask your attention for a moment to the inconveniences and dangers which have been attributed to this operation, before speaking of the indications which appear to call for its performance.

I pass over some objections which were formerly urged,—such as the danger of syncope, the danger of wounding an intercostal artery,—because, with the improvements that have been introduced in instruments and mode of procedure, these accidents are but rarely observed. A more serious objection is that paracentesis is likely to be followed by a reaccumulation of the effusion, requiring a repetition of the operation. The fallacy of this objection was long ago shown by Trousseau. It is of course evident that if the indications which positively call for the performance of the operation present themselves and paracentesis is performed before the inflammatory process has entirely expended itself, and while, therefore, there is still a tendency to further effusion, there will be some increase or return of effusion. The amount of fluid which has been withdrawn, however, will probably prevent the re-development of dangerous symptoms of over-distension of the chest; while at the same time there will be a more favorable condition for the absorption of the effusion. This objection could have force only upon the supposition that the minute puncture required would excite so much increase of pleural irritation as to lead to the effusion of serum from that cause alone. But there is no ground, experimental or clinical, for believing this.

Again, it has been objected that there is danger that a serous effusion may be replaced by a purulent one, after paracentesis. It has already been observed that the direct effects of the puncture itself are of the most trifling nature. There may be some little localized pleurisy around the puncture, but this never extends to a degree capable of causing constitutional disturbance, or of provoking purulent secretion from the pleura. If, therefore, it ever happens that a serous effusion which has been withdrawn by tapping is followed by a purulent one, it

must depend not on the mere puncture itself, but upon some accidental circumstance attending the operation. This circumstance is the admission of a large amount of air to the pleural cavity, which, in some instances, certainly appears capable of exciting an unhealthy inflammation of the serous membrane. The entrance of air has accordingly been advanced as another great danger incurred by this operation. It is to be observed, however, in the first place, that by the use of any of the methods I have described it is easy to exclude totally the air; and again, that it has been repeatedly shown by experiment that a single admission of air, even in large amount, to the pleural cavity does not usually excite inflammation. Although, however, the anxiety which has been felt on this score has certainly been exaggerated, it is undesirable to allow air to enter the chest during paracentesis, since it is possible that its action upon the particular stage of pleural inflammation present may lead to more serious results than would follow its admission to a healthy pleural sac.

Another objection which merits consideration is the danger of wounding the lung. Our knowledge of the physical signs caused by effusions in the pleural sac is so complete that although in certain rare combinations of conditions the signs may be puzzling and misleading, it is very seldom that any doubt can prevail in our mind as to the existence of a considerable stratum of fluid beneath any point where certain signs are observed, and of the consequent separation of the lung from the chest-wall. Under these conditions, then, there need never be any hesitation in introducing a delicate trocar, connected with an aspirator, which will instantaneously reveal the contact of the needle-point with fluid. It will still be said, however, that the diagnosis is not always certain, and that to insure the passage of the needle through the thick false membranes lining the pleura it is necessary to give a vigorous thrust,—vigorous enough to enter quite deeply into the lung should it be adherent beneath the point of puncture. I repeat that this accident can very rarely occur if a careful examination be previously made. And further, it is to be remembered that by grasping the trocar with our fingers at a certain distance from the point, we can easily regulate the depth of the puncture. But if, after all, the lung should receive a minute puncture, I am inclined to doubt if any serious results whatever would follow. The lung is compressed, almost immovable, and not in a condition to allow pneumothorax to occur from such a trifling wound of its pleura. As to the injury of the lung-tissue itself, my recent observations of the great tolerance of the pulmonary tissues of punctures by delicate needles have convinced me that the slight wound of the lung inflicted by an aspirator-needle would not do much harm.

Having thus alluded to the operation itself, and shown how free from danger it is and how easy of performance, it is of the utmost importance to determine exactly in what conditions it is called for, and what are the precise indications for its performance. This is the more important, indeed, on account of this very facility of performance and freedom from danger, since these have led some to

recommend paracentesis indiscriminately in all cases of pleural effusion, without regard to the presence of any distinct indications for its performance. This seems to me greatly to be deprecated. I am convinced that such views have a direct tendency to induce neglect of the means of internal treatment, which are of themselves sufficient to cure many cases of pleural effusion, and which should be scrupulously employed, even when paracentesis is performed. I am convinced that this operation may be performed, especially in cases of acute pleurisy, at so inopportune a moment as to be injurious rather than beneficial. It is surely necessary, when in France, where the use of paracentesis in acute pleurisy has been most urgently recommended, we see the question gravely raised and discussed whether the alleged increase in mortality of pleurisy during the past few years may not be due to the indiscriminate performance of this operation,—it is surely necessary to draw clearly the line between those cases of pleural effusion where it is positively indicated, and those where it is not necessary or desirable.

The indications for paracentesis are drawn from—

1. The quantity of the fluid.
2. The presence of urgent symptoms of embarrassment of breathing or circulation.
3. The quality of the fluid.
4. The failure of internal treatment.

1. The mere excessive quantity of a pleural effusion may become a very urgent indication, without regard to the cause or duration of the effusion. In cases where the entire pleural sac is distended,—as shown by absolute dulness extending from the base of the chest to the very apex, and by marked displacement of the diaphragm, liver, and heart,—paracentesis should be performed without delay. I should urge this despite the entire absence of threatening dyspnoea. In several instances, where excessive effusion had slowly and latently formed, I have known sudden death to occur, apparently from extreme interference with the heart's action. And, even if such an accident does not happen, experience has shown that these monstrous effusions are very slowly absorbed, with great injury to the general health, and usually with marked and permanent deformity of the thorax.

2. In other instances, the development of extreme dyspnoea, with marked interference with the action of the heart, accompanied by occasional paroxysms of alarming, almost suffocative orthopnoea, calls for the immediate performance of paracentesis. The intensity of these symptoms depends, usually, upon the rapidity of the formation of the effusion, and upon its quantity. Thus, a quart of serum effused within forty-eight hours will often give rise to more alarming interference with breathing than a collection of four times that quantity which has slowly formed. Still, it occasionally happens that rapid effusions are tolerated with remarkable ease.

But whenever the above symptoms appear in a marked degree, delay is dangerous, and the operation is imperatively called for.

3. In all cases where the effusion is known to be purulent, paracentesis should be performed

promptly. Absorption is, of course, impossible; and the chance of an opening through the chest-wall or into the lung, before the strength of the patient is far exhausted, should not be counted upon.

The determination of this question can frequently be based upon the character of the general symptoms, particularly upon the degree and persistency of hectic irritation. In any instance where such symptoms lead us to suspect the existence of a purulent pleural effusion, it is a simple matter to introduce a very delicate exploring-needle attached to an aspirator.

4. Even in cases of moderate effusion, when medical means have been faithfully tried for some weeks without inducing absorption, or even checking the tendency to increase of the effusion, it is desirable to perform paracentesis. The practical difficulty, of course, is to determine in any given case precisely when this time has arrived. Probably no definite law can be laid down; but we must base our action upon the rate of increase of the effusion, upon the influence upon the general health, upon the existence of a tuberculous predisposition, upon the degree of respiratory and circulatory embarrassment. In general terms, the time during which delay should be allowed is from three to five weeks.

I have thus attempted to sum up the chief indications for the operation, and which, whenever one or more of them is present, would seem to render its performance obligatory. It will thus be seen that I would recommend paracentesis absolutely in pyothorax, and in hydrothorax dependent upon the above indications, as in acute pleurisy, in latent pleurisy with serous effusion, in cancerous pleurisy, in tuberculous pleurisy, and in passive effusions, as in cardiac disease.

I cannot leave this part of my subject without again adverting to the fact that, although paracentesis cannot, in my opinion, be regarded as an ordinarily necessary and applicable treatment in acute pleurisy, it may be urgently called for in that condition. The dictum of Louis that simple pleurisy is never an immediate cause of death is erroneous and misleading. I have already alluded to instances of sudden death from pleuritic effusions which I have myself seen. Copland has known death to occur very nearly as suddenly as from disease of the heart; and Walshe states that he has seen a strong man, proved by dissection to be free from any other kind of disease, unexpectedly perish from syncope under the influence of unilateral effusion.

There is but little to be said with regard to the immediate effects of the operation. After the flow is established, the patient rarely complains of much pain except in cases where strong suction is used, and where the lung is unable to expand, or where violent cough occurs. Usually there is a decided sense of relief even during the operation, though the respirations and pulse are often accelerated owing to excitement. There is very generally dry, hacking cough, as the fluid escapes, evidently caused by the entrance of air into the pulmonary tissue and the effort at expansion. Occasionally the cough is

frequent, paroxysmal, and very painful. Occasionally, also, the violence of the cough and the consequent rapid unfolding of the lung-tissue cause the rupture of minute capillaries, so that there may be the expectoration of a little blood-streaked mucus. In this connection, allusion may be made to the peculiar copious sero-albuminous expectoration which sets in, in a small proportion of cases, soon after the operation.

After the operation is over, and the patient has become tranquil, there is generally a reduction both in the pulse and respiration. It has been asserted that in cases of serous effusion the temperature remains unchanged after the operation, while if the effusion be purulent the temperature falls. I have no thermometric observations of my own in cases of pyothorax, but in quite numerous cases of hydrothorax the temperature has either remained stationary or fallen slightly. Thus, in Case II., where the effusion was purely serous, the temperature was $100\frac{1}{2}$ ° C. at 8 o'clock P.M. on the evening previous to operation, and two hours after operation was $98\frac{1}{2}$ °, $99\frac{1}{2}$ ° six hours later, and $99\frac{1}{2}$ ° ten hours after operation.

Among the unusual phenomena met with in paracentesis is the escape of blood, more or less mixed with serous fluid, towards the close of the operation. Several cases are recorded where a free discharge of pure fluid blood occurred from the canula. I have seen this same occurrence during paracentesis for ascites, and in both instances the hemorrhage probably occurs from minute vessels in the serous membrane, or from false adhesions, which give way so soon as the uniform pressure exerted by the effusion is removed.

Case V.—Mr. B., æt. 30, of well-marked strumous constitution, had a grave attack of diphtheria in the winter of 1872-3, and had never enjoyed his previous health since. In March, 1874, he consulted Dr. Yarrow, who found him suffering with extreme dyspnoea, connected with large double pleural effusion. The origin and development of this had been entirely latent. His condition was alarming, from the extreme degree of exhaustion, pallor, and dyspnoea which were present. Internal treatment caused a reduction in amount of effusion on the left side, but proved of little avail in regard to the right side; and I was called to see the case in May, with a view of determining the propriety of paracentesis. After careful consultation, we decided to puncture the right thorax in the sixth intercostal space, at the line of the anterior border of the axilla. Dieulafoy's aspirator was employed, and seventy-five fluidounces of straw-colored serum were withdrawn. The closing portion of the operation was very painful; evidently in consequence of the powerful traction upon the expanding lung. There was still more effusion, but the flow was interrupted by the lung coming in contact with the canula. Immediately after the operation the patient was seized with violent paroxysmal cough, which caused so much pain as to require repeated doses of opium. There was immediate relief of respiration, with a return of respiratory murmur over a part of the area from which it had previously been absent. About six hours later, a very alarming syncopal attack occurred, from which he was only roused by repeated and large doses of stimulants. During the night copious sero-albuminous expectoration commenced, and in the course of the next twenty-four hours almost a pint was discharged. This was compared by the family to the fluid

which had been evacuated from the chest, consisting of a clear, serous fluid, in which a large muco-fibrinous coagulum formed. There seemed no real purulent element with it. This copious expectoration continued for about forty-eight hours, becoming mixed with a considerable amount of blood. After this it diminished, and the blood gradually disappeared. The patient experienced a good deal of relief for a few days, but rapidly relapsed. Extensive coarse friction-sound appeared over the left side, followed by effusion. Edema of legs appeared, and diarrhoea set in.

The *after-treatment* of cases in which paracentesis has been performed must depend entirely upon the character of the fluid. In cases of serous effusion, the same internal treatment and external applications must be continued after as before the operation, in the hope of preventing any re-accumulation of the effusion, and of promoting the absorption of the remaining portion. So, too, after the first puncture in cases of pyothorax, a slight hope may be entertained that the lung will expand and no fresh formation of pus occur. But in the great majority of cases the effusion recurs; and it is generally conceded to be useless to attempt to close the puncture made in the second operation. It appears to me preferable to introduce immediately a drainage-tube, so that the pus can be evacuated as rapidly as it forms, and thus, by preventing any extensive accumulation, the lung be aided in expanding. The forms of drainage-tubes recommended by various authors differ considerably; but that which has appeared to me most useful is a silver canula, bent so that the portion introduced within the thorax shall lie nearly parallel to the chest-wall and thus avoid the expanding lung. It is necessary that the external part of the tube should be guarded with a shield, to prevent it from slipping into the chest, as well as to enable it to be readily fastened in place by adhesive strips; and it must also be furnished with a plug or valve so that it can be closed constantly, save at certain intervals, when it is desirable to allow the pus which has accumulated to escape. When the secretion is active, this should be done daily; but when the pus is formed but slowly, and is healthy in character, it is sufficient to allow it to escape every other day.

In the following case, this mode of treatment will be seen to have been entirely successful:

Case VI.—Mr. T., æt. 42 years, of very strong constitution, was attacked on March 2, 1870, with acute pleurisy of left side. He was at first under the care of a homeopathic physician, and grew rapidly worse; and on May 16 there were still evidences of large effusion, with marked general symptoms, emaciation, hectic fever, and prostration. Dr. Galvez, under whose care he had recently placed himself, tapped him on May 16, low down on the posterior aspect of the chest, and evacuated about one pint of thick, discolored pus. The wound closed, and all the grave symptoms returned. The case now passed under care of Drs. F. G. Smith and S. D. Gross, by the latter of whom paracentesis was again performed on May 30. The puncture was made in the eighth interspace in the median line of the axilla, and seven and a half pints of laudable pus were drawn off, and a silver canula, with a valve, introduced. The subsequent treatment was conducted by Dr. Smith and myself in consultation. The contents of the left thorax were evacuated daily; the amount of pus

remaining over a pint for some time, and then gradually diminishing. No attempt was made to exclude air, so that an extensive pneumothorax was formed, the lung being retained in the upper and posterior part of the thorax. Still the discharge continued constantly laudable and unirritating. At first the patient's condition was apparently almost hopeless. There was edema up to the waist; the pulse was frequent, feeble, and irritable; and hectic fever was marked, with sleeplessness and anorexia. He was placed on the use of beef-tea and milk-punch, Basham's iron mixture, f₃ss four times a day, and elix. bismuth., strychnia, and pepsin, f₃i after each meal. No injections into the pleural sac were employed; as the lung expanded, a canula was introduced, curved so as to avoid touching the pulmonary pleura, and with a valve, so that the contents of the left chest could be evacuated daily. The symptoms steadily improved, and as the discharge diminished and the lung expanded, moderate contraction of the left chest occurred. The canula was withdrawn towards the close of August, at which time vesicular murmur was distinctly audible down to the point of puncture. I have seen him since several times (the last time only a few months ago); he is in perfect health, stouter than ever before, and with scarcely a trace of contraction of the left side. There is full and soft vesicular murmur over the whole of this side.

Very frequently, as in this case, it is impossible to exclude the air and prevent the development of pneumothorax after operations for empyema; but unfortunately the constant presence of air in large quantities in contact with the inflamed pleura and the accumulated pus is not always so free from harm.

It is true that, by the use of Dieulasoy's aspirator or Bowditch's syringe, it is possible to make repeated punctures with delicate trocars as frequently as the pus accumulates, and thus prevent the entrance of air. As I have never, however, had the opportunity of treating a case of empyema in this way, I can only mention it as well worthy of trial, although I suspect it will prove to be attended with some difficulties of its own. But when, after any form of the operation, the pus secreted by the diseased pleura is found to become offensive and irritating, it is necessary to employ some means to destroy its putrescence and irritating character, and modify the action of the inflamed surface. This is best done by injecting through the canula a quantity of whatever fluid seems appropriate to the case, so that it may be brought into thorough contact with the pleural surface. The amount of fluid thus injected should usually be from four to eight fluidounces; and after it has remained in the cavity of the chest a sufficient time, the valve of the canula may be opened, and the patient's body moved so as to cause it to escape. The frequency with which these injections should be repeated must vary with the effect produced by them; the milder ones may be used daily, while the stronger solutions, used with the view of altering the character of the action of the pleural surface, may be repeated at longer intervals.

In cases where the discharge is not offensive and putrid, but yet seems to possess irritating properties, quite large injections of tepid water frequently exert a soothing influence, and relieve irritation. If the discharge has become highly offensive, a small quan-

tity of liq. sodæ chlorinatae or of a glycerole of carbolic acid may be added to the water.

When the putrescence has been relieved, and yet an obstinate, purulent discharge is maintained, ioduretted injections, as originally recommended by Boinet (*Archives Générales*, May, 1853), are probably the most useful. They have been frequently employed, nearly always with some beneficial result, and not rarely with the effect of gradually checking the discharge and aiding in a perfect cure. In my own experience, when the strength of the injections has been judiciously apportioned, I have never known the slightest ill consequence to follow their employment.

The formula recommended by Boinet was as follows:

Tincture of iodine,	10 to 50 parts;
Iodide of potassium,	1 to 5 "
Water,	100 "

Trousseau employed an injection of medium strength, containing 25 parts of tincture of iodine, 1 of iodide of potassium, and 100 of tepid water; and I should recommend beginning with solutions even of one-half or one-third this strength, and gradually increasing up to the latter strength, but not exceeding it, since severe iodism has been known to follow the use of stronger solutions. As the discharge diminishes, and the lung expands and the chest contracts, so that the pleural cavity is reduced in size, the amount and frequency of the injections may progressively be reduced, until finally the canula may be removed.

It need scarcely be repeated that, throughout the entire course of this treatment, the most scrupulous attention must be paid to the internal treatment and to the diet and hygiene of the patient.

HYDRATE OF CHLORAL IN PUERPERAL CONVULSIONS.

BY EUGENE P. BERNARDY, M.D.

ON the morning (8 A.M.) of December 26, 1873, I was called to attend Mrs. M., æt. 18, first confinement. The messenger stated that she had been in convulsions since six o'clock that morning. On my arrival I found the patient just recovering from a convulsion, and immediately ordered potassii bromid, in half-drachm doses every fifteen minutes. The patient was a perfect blonde, stout but short-built; her hands and feet pitted readily under pressure. After a good deal of difficulty I succeeded in making a vaginal examination: the os was dilated to about the size of a silver dollar, *soft and very dilatable*. The vertex was presenting, but I was unable to recognize the position. During the examination the patient went into a most fearful convulsion, her face, lips, and tongue becoming almost black; the bromide seemed to have no effect whatever. I then determined to bleed, but, by desire of the family, waited for Dr. William H. Hooper an hour, when, finding the convulsions steadily increasing, I took about eight ounces of very dark blood, almost black; this was followed by a moderation of the convulsions, but did not arrest them. Dr. Hooper having arrived, a vaginal examination was made; the os was found in the same condition as before. It was then decided to etherize the patient, dilate the os forcibly, and deliver as quickly as possible.

Having thoroughly etherized the patient, we commenced the dilating process with our fingers, until the os had opened to about two inches in circumference. The position having been made out (left anterior position vertex), and the bag of waters ruptured, we determined to apply the forceps,—the head as yet at the superior strait. While Dr. Hooper made pressure over the uterus, to steady the head and prevent it from slipping, I readily applied the forceps (Bedford's); extraction was made to imitate nature as closely as possible. In one hour and a half the patient was delivered of a living child, without the slightest injury to herself or it.

After the birth of the child, the ether was withdrawn, when the convulsions reappeared, and followed one another in rapid succession, steadily increasing in intensity. We then decided to give hydrate of chloral in scruple doses every half-hour. At the second dose the convulsions ceased entirely. The chloral was kept up every hour. At all times the patient could be aroused, the chloral never producing a profound sleep.

The patient was up and attending to her household duties on the 20th of January of the present year.

In looking at the above treatment, it will be seen that bleeding and large doses of bromide of potassium (one-half ounce was given in divided doses) had no effect on the convulsions, while forty grains of chloral arrested the convulsions at once. This is the third case in which I have used chloral with success. For my first case, see the *Philadelphia Medical Times* of January 15, 1872. The second case occurred in the summer of 1872; forty grains of chloral had the most decided effect, arresting at once the convulsions.

When I first prescribed the hydrate of chloral, in 1871, I had not heard of its ever having been used in puerperal convulsions. It was only two years later that I found an extract in *Hays's American Journal* (April, 1873), which referred to an article in the "Transactions of the Edinburgh Obstetrical Society," sessions 1869-70-71, page 50, being a report of a case of puerperal convulsions brought on through fright, treated by Dr. Alexander Milne (Jan. 25, 1870) with grs. ix of hydrate of chloral with perfect success.

In Leishman's "System of Midwifery," the use of hydrate of chloral is mentioned, pages 649-50. On page 650 is given an extract from an article taken from the *Gazette des Hôpitaux* of February 22, 1873, where chloral was given in puerperal convulsions with success. This would make it two years from the time I reported my first case.

It seems, therefore, that I must have been the first to use hydrate of chloral in the treatment of puerperal convulsions on this continent. There is no doubt but that Dr. A. Milne was the first to use the article in Europe, but for its use in puerperal convulsions in America I think I can justly claim the priority.

In the administration of chloral, there is no case of puerperal convulsions in which it cannot be given without fear,—there is not that hesitancy which is found in other practice. Take, for instance, bleeding: we all know that puerperal convulsions may arise from various causes,—from anæmia as well as from plethora. Now, if we decide to bleed, before we do so we ask whether this condition arises from anæmia or plethora. If from anæmia, we cannot

bleed, for we will most assuredly destroy our patient. In giving the hydrate of chloral no such fine question is to be decided.

The commencing dose should not exceed one scruple. It is better to give smaller doses repeated than large doses at long intervals: the system seems to be able to take up a smaller dose more readily; the effect can also more readily be watched.

The formula I generally use is as follows:

R Chloral hydrat., 3vij;

Syr. aurantii cort.,

Aq. menth. vir., aa f3ij.—M.

Sig.—Tablespoonful every fifteen minutes or half-hour till convulsions cease, then every hour or two, according to circumstances. The medicine must be given in an equal quantity of water.

TRANSLATIONS.

DRAINAGE OF THE PERITONEAL CAVITY.—V. Mussbaum (*Berlin. Klin. Wochenschrift*), having seen the suggestion of Marion Sims to facilitate drainage from the abdominal cavity after ovariotomy by the perforation of the cul-de-sac back of the cervix uteri and the introduction of a drainage-tube, made use of this mode of treatment in some of his cases.

Upon several occasions when the operation had been of unusual severity, he, by the use of this treatment, obtained successful results, although from his former experience with similar cases he looked for a different issue.

W. A.

HYPODERMIC USE OF EXTRACTUM SECALIS IN HERPES ZOSTER.—Sachse (*Berlin. Klin. Wochenschrift*) stated in a meeting of the Berlin Medical Society that in the treatment of a patient with herpes zoster, who applied to him on the 11th of November, he made use of a solution of the ext. secalis in glycerin, with the most favorable results. He saw the patient again on the 13th of the month, and found that the pain had ceased shortly after the injection had been made, and that there had been no fresh eruption.

W. A.

POISONING FROM VANILLA-ICE.—Dr. L. Rosenthal gives (*Berliner Klin. Wochenschrift*) an account of some cases of poisoning from vanilla-ice which came under his notice in the latter part of August of last year. The entire family were affected with symptoms simulating those of cholera, and the severity of the symptoms was proportional to the amount of the ice which had been eaten. A small dog, after having been allowed to lick the plates, was also attacked with severe purging and vomiting. During the same night, other cases of a similar character occurred, and upon inquiry it was found that the patients had all indulged in the same sort of ice-cream, and that it had been procured from the same café. So far as Dr. Rosenthal knows, this form of poisoning occurs only after indulgence in vanilla-ice, so that although lighter forms of disturbance of the intestinal tract may be attributed simply to the influence of the cold, the origin of these severe symptoms must be sought in some constituent of the flavoring-matter. So far, he has obtained only negative results from his experiments, and is not able to give any positive information upon the subject. He suggests, as a possible explanation, that the irritant properties may be contained in some portion of the fruit which is not fully ripe.

W. A.

EPITHELIOMA CONTAGIOSUM IN CHICKENS (Professor O. Bollinger: *Virchow's Archiv*).—It is well known that numerous epidemic affections occur among the various kinds of fowls which are kept for domestic use, but in most of the accounts which are given of such cases the details are so meagre, and so little attention has been paid to the pathological conditions met with, that it is almost impossible to assign to these affections their true place among diseases.

Bollinger has made some observations in this direction, and while making investigations upon anthrax he made inoculations upon pigeons and chickens, satisfying himself that this disease is but slightly, if at all, communicable to birds. In the autumn of 1872 he had several opportunities of seeing cases of genuine diphtheritis in the larynx and fauces in various poultry-yards in Zurich, and more lately he has devoted himself to the study of a peculiar disease to which birds of this class are subject, which gives rise to an eruption suggesting that of smallpox, and which is characterized by great virulence and power of contagion.

In October, 1872, an epidemic broke out in a poultry-yard containing twenty-six fowls, and in a short time all the birds were affected; many of them died, and others became so miserable that the owner was compelled to kill them.

Some of the bodies were given to Bollinger for examination, and he found the following conditions. The bodies of the birds were much wasted, the muscular tissue being very white. About the head, especially upon the eyelids and around the eyes, were numerous tubercles of the size of a pea, which were grayish-white and reddish in color, and of a tolerably dense consistency. On the surface they were partly flat and partly irregular in consequence of beginning ulceration. Similar tubercles were found near the nasal openings and at the ear. In the interior of the cavity of the mouth, upon the hard palate and other organs, were elevations of various sizes up to that of a bean, which looked like condylomata. The digestive tract and the genito-urinary organs were found to be healthy, with the exception of being anaemic to a marked degree.

Microscopic examination showed that the smaller tubercles and those in an early stage of development had their origin in a thickening of the epidermis, which gradually increased in extent, and pushed itself into the subcutaneous connective tissue, which at these points was much thickened. As the growths progressed they were found to consist entirely of epithelial cells, and the growths inside the mouth upon the mucous membrane were of a similar character, but had to some extent undergone fatty degeneration. From the manner in which the disease had made its appearance and spread among healthy fowls which were in communication with those already diseased, it was supposed to be contagious, and this was soon demonstrated to be the case by experimental investigation. Healthy birds were taken and inoculated with matter from the tubercles upon those which were diseased, and in a short time phenomena were caused which resembled in every respect those which had been already noted, and the same uniformity was found in the appearances given by the rhinoscope. As soon as the contagious nature of the disease was established, all the fowls kept in the yard in which the outbreak occurred were killed, and the quarters which they had occupied thoroughly cleansed and disinfected.

In the spring of 1873 a new lot of chickens was purchased, and put into another part of the same yard, at least one hundred paces from the spot where the previous lot had been confined. In a short time the new-comers were attacked with the same disease, and many of them also died. It must then be concluded that epithelioma contagiosum, which appears as an

enzootic affection among chickens and perhaps also among pheasants, is a very contagious disease, which manifests itself by a tubercular eruption about the head of the birds, consisting of a limited hyperplasia of the epithelium, occurring principally upon such spots as are not covered with feathers. As a rule, a similar eruption is seen upon the mucous membrane of the mouth and fauces, and also upon the conjunctiva, and upon these surfaces it readily undergoes ulceration and cheesy degeneration. Catarrhal affections of the mucous membrane of the head are also common in conjunction with the other symptoms, and there may be a purulent conjunctivitis with secondary panophthalmitis, together with inflammation of the lining membrane of the nasal cavities, which can go on to suppuration.

Bollinger endeavored to inoculate this affection upon quadrupeds, and found that it could not be done. This fact, he thinks, goes to confirm the view drawn from its pathological anatomy, that the disease in question has nothing in common with cowpox, as some of the earlier observers have asserted; and he concludes, further, that all that has been previously described as vaccinia among birds has in reality been contagious epithelioma.

W. A.

THE CAUSES OF ALKALINITY OF THE URINE AND THE AMMONIACAL CONDITION.—MM. Feltz and Ritter give, in the *Journal de l'Anat.*, No. 3, 1874, an account of experiments performed by them, principally upon dogs, with the object of ascertaining what modifications the urinary secretion undergoes in the healthy body under certain circumstances. These experiments were as follows: 1, the urine was mechanically prevented from escaping by ligature of the urethra; 2, sounds impregnated with fermenting material were repeatedly introduced into the bladder, or small quantities of fermenting fluids were injected and the urine retained mechanically for some time; 3, solutions containing urinary ferments, urea, ferments of different ammoniacal salts, or of urine in a state of fermentation, were injected into the veins.

The following conclusions, based upon the results of their researches, were arrived at by MM. F. and R.:

1. The urine, except in affections of the genito-urinary apparatus, is rarely ammoniacal. When this condition is found, it has usually resulted from impurities in the vessel in which the secretion has been received, or from admixture with more or less altered albuminoid substances.

2. The urine placed in contact with ammoniacal ferment takes on fermentative action with varying degrees of rapidity in different cases, depending, apparently, on its chemical composition.

3. The urine of healthy animals, exempt from vesical or renal lesions, does not become ammoniacal when retained a long time in the bladder by mechanical means.

4. Sounds impregnated with ferment do not render the urine of healthy animals ammoniacal, unless such sounds are allowed to remain a long time in the bladder.

5. Slight alkalinity is produced by ferment introduced into the bladder and retained there some time.

6. Uræmic accidents cannot be attributed to either retention of urea or carbonate of ammonium resulting from its decomposition; for the first of these substances is innocuous, and the second only produces convulsions in such concentrated doses as it is difficult to admit can be formed in the blood.

7. The decomposition of urea into carbonate of ammonium only takes place under the influence of ferment or of chemical agents (of the latter no account was taken). This decomposition does not appear to take place in the blood, for simultaneous injections of

urea and ferment do not provoke uræmic accidents. It is only by increasing the proportion of ferment that we produce symptoms, to be referred, however, rather to septicæmia.

8. The chloride, tartrate, and other ammoniacal salts produce effects similar from a physiological point of view to those of carbonate of ammonium, when injected into the blood in concentrated solutions. They are rapidly eliminated by the urine and saliva. The tartrate and benzoate do not undergo their usual transformation; the urine never becomes ammoniacal, nor does the breath.

9. These salts in a solution so dilute as not to dissolve the blood-globules modify, nevertheless, the properties of the latter. This fact is demonstrated by microscopic examination and by analysis. The capacity of the blood-globule for absorption of oxygen is diminished; its resistance to water and to acetic acid is, on the other hand, increased.

10. May not some uræmic accidents be attributed to simple retention in the economy of ammoniacal salts normally eliminated by the urine, without invoking the aid of a previous transformation of urea into carbonate of ammonium?

THERAPEUTIC NOTES.

INJECTIONS OF A SOLUTION OF ERGOTIN IN PROLAPsus ANI.—Von Langenbeck, of Berlin, is said to have been very successful in his treatment of prolapsus ani with hypodermic injections of a solution of ergotin, in the proportion of ten parts to one hundred parts of distilled water.

After the bowel has been replaced and the point of the syringe inserted into the cellular tissue, two grains of ergotin are injected. This should be repeated for four weeks on every third day.—*Physician and Pharmacist.*

EXTERNAL EMPLOYMENT OF PERCHLORIDE OF IRON IN VARICOSE VEINS.—Dr. Linon uses compresses wet with a solution of perchloride of iron, formed by adding one part of the liq. ferri perchlorid. to twenty-five parts of water. The compresses are kept in position over the seats of the varices by means of a bandage smoothly and somewhat firmly applied. After these compresses have been in place for twenty-four hours the venous dilatations seem almost entirely removed. The compresses are kept applied, however, until they are entirely gone, which is usually in from eight to ten days, according to volume.

By this dressing Dr. Linon says he has succeeded little by little in dissipating enormous varices, accompanied by violent pain and the appearance of black points on the skin. That the good effect thus produced is not due to the bandaging alone, is shown by the fact that the varices do not return after the bandages are taken off. Flannel bandages, Dr. L. thinks, are preferable to those made of linen, since they are more elastic, will contain more of the liquid, and do not become stiff and incapable of absorbing.

THE following ointment has been used successfully by Dr. Kennard in the treatment of incontinence of urine in paralytic cases:

R. Morphiae sulph.,
Veratriæ, $\frac{1}{2}$ gr. x;
Axungiaæ, 3ii.—M.

Rub well into the perineum three times daily.

HYPODERMIC INJECTIONS OF STIMULANTS IN ADYNA-MIC CONDITIONS.—A writer in the *Progrès Médical* advises the administration of diffusible stimulants by subcutaneous injections in those conditions of extreme

prostration where the administration of medicine by the mouth is difficult or impossible, and where it is desirable to produce a rapid effect. Camphor dissolved in twice its weight of oil of sweet almonds or thirty to forty drops of sulphuric ether may be employed in this way. Generally the patient feels a sharp pain for a few moments following the injection, but absorption takes place quickly, and the adynamia is successfully combated.

PRESERVATION OF VACCINE LYMPH.—Dr. Preston spreads the lymph on a morsel of paper, by means of a camel's-hair pencil charged from the vaccine vesicle; he then allows it to dry. If the vaccine matter is to be kept a long time, the paper should be covered with a light coating of albumen. In order to make use of this prepared paper, it is only necessary to moisten it slightly with the breath, and then to apply a fragment to the abraded skin.

TREATMENT OF INTERNAL AFFECTIONS BY INJECTIONS OF LARGE QUANTITIES OF WATER INTO THE LARGE INTESTINE.—Dr. Mosler (*Berliner Klin. Wochenschrift*), after alluding to Gustave Simon's demonstration that comparatively large quantities of water can be injected into the large intestine with impunity, suggests various cases in which this method of treatment may be made available. That such injections may penetrate as far as the ileo-cæcal valve has been shown in cases in which fistulæ have existed in this neighborhood. In several such cases, water introduced into the rectum has made its appearance within a few minutes at the fistulous orifice.

The best position for a patient while receiving such injections is on the elbows and knees, occasional lateral movements favoring the penetration of the fluid. The position on the back, however, may also be used. The usual injection-syringe may be replaced with advantage by a reservoir, hung at an elevation of two feet, and connected with a rubber tube and nozzle. This arrangement insures a steady and equal pressure of the fluid, which may be controlled by compression of the tube by the finger and thumb. Even such large quantities as five to nine pints of water may be slowly introduced without inconvenience.

The cases in which this method may be employed are the following: 1. In the different forms of intestinal obstruction, particularly such as arise from accumulation of faeces. 2. In cases of internal hernia, particularly diaphragmatic and retro-peritoneal. It is understood that it is only at an early period this method may be of use. Later, when softening of the tissues has set in, it would of course be dangerous. 3. In many diseases of the large intestine, particularly dysentery, where the injection may first be of use in cleansing the intestine of irritating débris, and then may be employed to make topical applications of astringent and disinfecting liquids. 4. In different forms of icterus, particularly the catarrhal, and in obstruction of the ducts by gall-stones. Recent researches have shown that injections of water into the intestinal canal augment the secretion of bile, which, from being thick and viscid, becomes quite fluid, and tends to carry off in its course through the biliary canals the accumulated plugs of mucus, and even perhaps the calculi occupying them. 5. In certain cases when a tænia may have been dislodged from the upper intestine, but has attached itself to the walls of the colon, where the ordinary tæniafuges cannot reach it. In such cases an injection of mingled tepid water and milk to the extent of several pints often serves to bring the offender away. In the case of seat-worms the efficacy of such injections is unquestionable, and they should be large, for the parasite is as often found in the entire length of the large intestine as in the rectum alone.

July 11, 1874]

**PHILADELPHIA
MEDICAL TIMES.
A WEEKLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE.**

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, JULY 11, 1874.

EDITORIAL.

**REPORT OF THE PHILADELPHIA BOARD
OF HEALTH.**

IT is very rarely that a conscientious journalist has an opportunity to say a word of praise regarding any matter connected with our city government. Wendell Phillips's assertion that republicanism has never yet solved the problem how to rule large cities has too much truth in it. *Raptore et oscines*, the birds of prey and the finches, the plunderers and the plundered, the politicians and the people, express the general condition of affairs. It is therefore with unfeigned pleasure—the pleasure of a novel experience—that we commend most heartily the Report of our Board of Health. Who its real author is we do not know, but the work has apparently been mainly performed by Dr. William H. Ford, and we congratulate him and his coadjutors on the result. Of course, in the space of an editorial we cannot follow the long line of statistics, reproof, warning, and argument here marshalled, but for the sake of those who may not see the report we note a few things that have especially attracted our attention.

First in importance, it seems to be clearly made out that Philadelphia is the most healthy city in the world, so far as the records are known. This is shown by the following figures, compiled from the report of the English Registrar-General :

"According to the report referred to, then, the annual death-rate per thousand inhabitants of certain prominent cities is as follows :

Philadelphia	.	.	.	22.1	Turin	.	.	.	30.4
London	.	.	.	22.7	Florence	.	.	.	31.6
Paris	.	.	.	24.4	Rome	.	.	.	32.2
Bombay	.	.	.	27.6	Vienna	.	.	.	34.4
Berlin	.	.	.	29.9	Madras	.	.	.	37.6"
New York	.	.	.	30.1					

A curious fact which shows the distinctively religious cast of the community is that of 7891 marriages which occurred during the year, only 53 were civil, all the others being performed by clergymen, using religious ceremonies. Whether there is any connection between the low mortality and the decidedly religious tone of our people is, perhaps, hard to say. But factors whose influence in reducing the death-rate cannot be gainsaid are the wide extent of territory covered, the exceedingly comfortable housing of the poor, with the consequent lack of crowding, and the excellency of the food and water supplies. Although our saying it may raise a cry of horror among the orthodox sanitarians, yet we have long harbored a suspicion that the lack of sewerage and the habitual use of open cesspools that prevail have something to do with the great freedom of our city from malignant epidemics of typhoid fever and similar diseases.

A discussion of this point at length would lead us too far away from the matter immediately at hand, but we may briefly indicate a few of the reasons for our suspicions. It is, we think, well proven that decaying animal matter is not nearly so deleterious to human health as when the putrefying mass is a mixture of vegetable and animal matter; and the more complex this mixture is, the more serious are the results apt to be. Now, in sewers, animal and vegetable matters of all sorts are conjoined into one mass. In cesspools usually, at least in this city, the contents are almost wholly animal. Again, the risk to health depends more upon the concentration than even upon the amount of the poison. In open cesspools diffusion of the mephitic vapors occurs. In sewers, badly or not at all ventilated as they often are, the vapors collect into densely poisonous masses. Further, cesspools are almost universally distinct from the dwellings, whilst sewers connect, by means of the water-closets, directly with the palace as well as the hovel, and no words of ours are needed to call up examples where a sudden puff or a diffusing stream of vapor rising from the water-closet has produced most serious illness. Be these things as they may, the fact remains that malignant, epidemic, contagious typhoid is almost unknown in this city. Out of some hundreds of cases of enteric fever which have come under our notice, we have never yet been able to trace one to a definite introduction of a poison into the system, and we have never seen any

epidemic influence, and have never witnessed the slightest contagion.

The Philadelphia system of emptying the cess-pools is certainly as disgusting as it is disgraceful and inexcusable. We suppose there is not one of our city readers who has not, when taking ladies home from parties, opera, etc., been compelled to pass by the practically open night-carts, with the buckets of filth passing from hand to hand, and to breathe an air perhaps as heavily laden with the curses and obscene language of the degraded workmen as it is with the vilest of odors. According to the report before us, there are several machines which obviate all this. One of them, which works upon the same principle as Dieulafoy's aspirateur, seems to us especially commendable. A metallic air-tight tank has the air pumped out of it by means of machinery whose motive power is found in the wheels of the cart which conveys the apparatus to the place where it is to be used. Then, a metallic pipe being run into the cesspool and a cock opened, all the liquid and semi-liquid contents are noiselessly and odorlessly transferred to the chamber or chambers employed. After this, the comparatively small amount of matters too solid to be pumped up may be removed by means of metallic buckets with screwed covers.

Great interest always attaches to the statistics of marriages and of births and deaths in a community. We have already noted the number of the first of these, but may now mention, as instances of the ruling passion strong in death, that two men over eighty years of age took unto themselves blooming brides,—one of the latter being in the thirties, the other in the forties. The number of successful births during the year was 17,811, of still-births 891, of deaths 15,224: so that our city added to its population some twenty-five hundred persons by natural increase.

In praising, as we have done, the report before us, it is not because we are satisfied with the sanitary administration of our government, but because the health board seems to be doing all it has power to do, and because it is continually trying to influence those great curses of Philadelphia,—its City Councils, or legislative bodies, and its executive departments.

Lying between two rivers, all bathing is prevented by a stupid application of a good ordinance, and no free bath-houses are provided for use during our intense summer heat; surrounded on all sides by suitable country, the dead continue to be actually piled one upon another in cemeteries situated in the oldest and densest portions of the city.

With a past reputation for cleanliness second only to that of Holland, and paying enormous sums yearly to contractors for cleansing our streets, the filth so abounds in our city that Dr. Ford must have meant to be facetious when he says the work of street-cleaning has been "conducted under contract;" if he had been writing soberly he certainly would have put it, "neglected under contract." So we could go on complaining *ad infinitum*; but what is the use? who cares? Surely not the "ring" that rules us with its iron despotism.

FROM a letter dated London, June 10, 1874, received by a medical gentleman of this city, we learn that Mr. Erichsen is about to visit this country on a tour of pleasure and of observation. He will leave England on the 30th of July; and, after spending a few weeks in Canada, where he has friends and connections, he will pass into the United States, where, we are sure, he will everywhere meet with a cordial welcome from his professional brethren. As a surgical author, Mr. Erichsen has won for himself a world-wide reputation.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MAY 14, 1874.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. L. A. DUHRING presented, under the microscope, a section of *lupus vulgaris*, a full description of which will appear in the next number of the *Medical Times*.

DR. C. H. BURNETT exhibited a *polyp removed from the left ear* of a large, healthy young man, 21 years old. The patient states that he has been aware of the existence of the polyp in his ear for seventeen years. He assigns no reason for its occurrence, and says there has never been much discharge attending the growth of this body in the ear. There has never been any operation even attempted on the ear, although he has frequently requested physicians to remove the polyp since it has extruded itself from the orifice of the meatus.

Upon inspection of the affected ear, I find the orifice entirely closed by a "button" of the polyp, covered with integument, and a trace of hardened secretion around the orifice of the meatus, at the sides of the aforesaid "button." There is no odor whatever, nor has there ever been, according to the patient's statement. It was impossible to see beyond the already crowded orifice of the meatus, and I therefore, after testing the hearing, proceeded to extract the polyp.

The hearing for a watch, audible at forty feet, was reduced to contact, and the hearing for the voice was reduced so much as to render the left ear useless in conversation.

I passed the wire noose of a Blake's-Wilde's snare

over the projecting "button," and came into a widened meatus, proceeded with the instrument as far inwards as I could get it, and then constricted the innermost part of the growth, and, with the most powerful traction I could make, brought away the polyp. This operation caused the patient *no pain*. There was considerable hemorrhage for three to four minutes (about two ounces), then the hemorrhage ceased almost instantaneously of its own accord. The patient states that next day, while stooping at a spring to drink, his ear suddenly gave forth a gush of blood, but stopped bleeding as suddenly as on the previous day.

After the removal of the polyp, which was of a sigmoid shape, I found the meatus greatly widened and excavated posteriorly, where the larger curve of the sigmoid-shaped polyp had been lying.

I could not detect any odor in the ear, nor was there any confined discharge behind this large polyp.

After the operation, the hearing for the watch rose to six feet, and conversation was heard on the left side. I touched the point of attachment of this growth with chloro-acetic acid several times, causing great pain for a few moments. The pain from the use of this acid is always relieved by a syringeful of warm water. I am unable to state the appearance or condition of the membrana tympani, since the fundus of the meatus auditorius was entirely filled up by the broad cut surface of the pedicle of the polyp.

The specimen was referred to the Committee on Morbid Growths, which reported May 28, 1874, as follows:

"The large aural polyp presented at the last meeting by Dr. Burnett measures an inch in length and half an inch at its widest diameter. The growth is more or less distinctly lobulated, and covered with a firm, whitish membrane. The most pendent and exposed portion of the growth is covered with layers of flat epithelial scales, appearing as narrow, spindle-shaped cells when seen in profile. Towards the pedicle, however, the growth is covered with a cylindrical epithelium; having a long tapering extremity, and furnished with a large vesicular nucleus; the broad free extremities are still occasionally furnished with a fringed, ciliated margin. The entire peripheral border of the growth is more or less distinctly marked with low papillary elevations; in the spaces between them, corresponding depressions occur, into which the epithelial layers are seen to dip down, the size of the cells gradually decreasing and becoming more rounded until they reach the basement membrane; the whole presenting a picture closely resembling that of the rete Malpighii of the skin."

"The interior of the growth is densely packed with small, round, finely-granulated and nucleated cells; upon pencilsing these away, a very delicate fibrillated stroma is seen, the fibres of which cross each other in every direction.

"The blood-vessels are quite numerous, and, being filled with a natural injection, are very prominent. The larger trunks, occupying the more central portions of the tumor, send out radiating branches towards the periphery.

"There are also present in the growth a very few mucous glands, whose efferent ducts are seen in the transverse cuts as circular spaces lined with a single layer of cylindrical epithelium. A few of the sections made, fortunately, exhibit the branching and racemose extremities of these ducts. These microscopical appearances, as briefly mentioned above, led your committee to designate this tumor as a *mucous polypus*,—by far the most frequent variety of aural polypi. The presence of the ciliated epithelium can leave little doubt as to its origin from the mucous lining of the tympanic cavity. In fact, modern investigations tend to make this mem-

brane the sole source of all aural polypi; the cutis lining the external meatus taking little or no part in their production.

"These mucous polypi of the ears do not present any histological features differing from those hyperplastic conditions of the mucous membrane of the nose, vagina, and other localities which lead to the formation of polypoid growths. Like them, they are also liable to undergo myxomatous degeneration; at least such has been the experience of some members of your committee who have given considerable attention to the investigation of aural tumors. The gelatinous consistency and translucent appearance of the lower third of this specimen led to the suspicion of myxomatous degeneration having occurred in it. But the absence of any mucin reaction and of anastomosing stellate corpuscles did not warrant such a conclusion. The only case so far recorded where the entire aural polypus was a pure myxoma is that of Steudner, to whose valuable paper* upon 'The Pathological Anatomy of the Aural Polypi' we would refer those who may be interested in the subject."

Dr. BURNETT also presented a *blue bead* seven mm. in diameter, four mm. in thickness, and perforated at its centre, removed with a mass of *inspissated cerumen* from the right meatus auditorius externus of a woman 68 years old.

The patient was entirely unaware of its presence in her ear, and, of course, could give no account of its mode of getting there. It was in all probability placed there in her childhood and forgotten, as it produced neither pain nor deafness.

Lately, however, the accumulation of cerumen became so great as to cause deafness, and the removal of the obstructive mass to relieve the deafness led to the discovery of the blue bead.

Dr. JAMES TYSON presented the following specimens: 1. *Lungs from a case of acute catarrhal pneumonia with secondary miliary tuberculosis of the pleura*, removed from J. W., aged 33, an Irishman and a seaman of rather intemperate habits. He had descended from healthy parents, and had himself always been well up to two months before admission to the Philadelphia Hospital on March 11, 1874. About January 1, 1874, after exposure while drinking heavily, he contracted the illness from which he died. This began with a cough, some dyspnea, and white expectoration. At first he did not think much of it; but, having lost a good deal of flesh, and beginning to have chills, flushes of heat, and sweats, he determined to enter the house. There has never been any haemoptysis.

On admission, March 11, 1874, he was somewhat emaciated, but not very anaemic; his tongue was coated; he had no appetite, and his bowels were loose; except that he was weak he said he felt very well, coughing scarcely any, with white expectoration. There was, however, fever. He was ordered quinine, counter-irritation by a blister, and opium to control his bowels.

On physical examination, there was observed more motion of the left side throughout than the right. In front there was no difference in the vocal fremitus, nor in the sides of the chest. Percussion on right side revealed diminished resonance as far as the fifth rib anteriorly. Left side, resonance was normal in front and in the side.

Auscultation.—Left lung in front and side is normal; some harshness at the very apex. Right lung in front—distinct blowing breathing at apex, becoming almost normal as we reach the base; on forced inspiration, crepitant râle is heard from the third rib upwards.

Posteriorly.—Left lung, supplemental breathing

* Archiv. f. Ohrenheilkunde, Bd. iv. p. 199.

throughout. *Right*, from spine of scapula down, broncho-vesicular; but above, a dry crackling is heard, and prolonged, almost blowing expiration.

March 18.—Another blister to the right apex. Ordered yesterday milk-punch, his pulse being weak—114. He was ordered on admission, besides his quinine, a mixture of liq. potassæ, 3*fl. v.*; syr. tolu, tinct. digitalis, $\frac{1}{2}$ gtt. v., and liq. potassium citrat. Bowels yet somewhat loose, though easily controlled by Dover's powders given at night. Coughs very little; expectoration continues white and frothy.

March 19.—The alkaline cough-mixture was stopped, and gr. iii of quinine, j of digitalis, and $\frac{1}{2}$ of opium given four times daily.

March 22.—Bowels are regular; feels very weak. Quinine and punch continued, with a mixture of liq. ammonii acetat., ammonii carbonat., gr. v.; tinct. opii, gtt. v., tinct. digitalis, gtt. vj, every two hours.

On March 21 was noted a marked disposition to drowsiness.

April 6.—Condition continues about the same; temperature ranges from 100° to 101° , and pulse 120.

April 10.—Is failing; ordered a cough-mixture containing bicarbonate of sodium, muriate of ammonia, and syrup of ipecacuanha, hoping, if possible, to *thin out* the deposit in the lungs; also a large poultice over his chest.

April 16.—Is undoubtedly better since the institution of last treatment. Temperature 100° , pulse 117. Skin moist. On auscultation, the crepitant râles seem to have disappeared from the right apex and the axilla. Posteriorly, however, the crepitation is distinctly heard in the right supra-spinous fossa. In the left lung anteriorly are heard coarse bubbling sounds, and posteriorly, some sibilant rhonchus. Treatment continued.

The amendment referred to was not permanent: he continued gradually to grow weaker, and died May 12, 1874.

Post-mortem examination.—On opening chest-cavity the pleuræ of both lungs were thickened: that of left to the extent of three lines; the right one less markedly so. The external surface of right pleura dotted throughout with gray granulations; pleura of left lung, which exhibited the most marked thickening, has no gray granulations; diaphragmatic pleura (right side) also covered with these granulations; and so, too, the external surface of pericardium. Old cavities in each apex, the larger one ($1\frac{1}{2}$ inches in diameter) in left apex; the smaller one, with breaking-down walls, in the right one. A solid, cheesy deposit occupying whole upper half of right lung and nearly as large a portion of the left lung. Few miliai gray granulations scattered throughout lower part of lung; but none apparently in the left. In extreme lower part of left lung, in contact with pleural base, was found a little nest of cheesy deposit, three-quarters of an inch in diameter. No miliai gray granulations in brain-membranes, peritoneum, or pericardial sac. Liver very large and fatty, weighing five pounds two ounces. Kidneys passively congested, but otherwise normal.

Remarks.—A study of the temperature-record carefully kept throughout his illness, but too lengthy to be introduced here, reveals the striking difference between the morning and evening temperature so characteristic of acute catarrhal pneumonia. Although the case was carefully watched to this end, there was no change or symptom to which we could point as indicating the onset of the miliary tuberculosis. The symptom of drowsiness was once noted as one likely to indicate this complication; but the absence of tubercle from the membrane of the brain proved this suspicion to be unfounded.

2. *Aneurism of the arch of the aorta, with enormous hypertrophy of the heart.*—The specimen was removed

from a Canadian, a baker, aged about 55 years, who had been under Dr. Tyson's observation for five or six years. He was the subject of a double rasping murmur of great loudness, which could sometimes be heard at some distance from the body. There was also a very marked upheaving impulse, which influenced the entire anterior wall of the thorax. He was subject to attacks of extreme dyspnœa, in one of which he died.

At the *post-mortem* examination there was found to be no rupture, and perhaps the most striking feature in connection with it was the small size of the aneurism, which the physical signs led one to expect to be large. This involved the extreme upper portion of the arch of the aorta, but was a true sacculation of all the coats, large enough to receive a good-sized walnut, and slightly constricted at its entrance into the vessel. The aorta was atheromatous.

The extreme size of the heart was also striking. It weighed thirty-five ounces, and was evidently the direct cause of the upheaving impulse so marked before death.

3. *Cancer of the gall-bladder.*—P. G., aged 63, was admitted to the Philadelphia Hospital March 5, 1874; born in Ireland; was formerly intemperate. No history of cancer in the family. Has been a very healthy man. Ten years ago an epithelioma appeared on his lip; it gradually increased in size, and has been operated upon three times,—the last time, a year ago, in this house, by Dr. Pancoast. Since admission he has presented the same pale, anaemic appearance he does now. There has been constantly aggravated dyspepsia, relieved only by milk diet; also occasional attacks of vomiting, which would last for over twenty-four hours, and accompanied by quite severe colic. His bowels are very constive, and a diarrhoea is very apt to set in when the bowels are opened artificially. The normal tympany seems to prevail throughout the abdomen. Since admission, has been taking a mixture containing tinct. ferri chlorid., nitro-muriatic acid, and extract of taraxacum.

April 15.—Has been steadily improving as to his symptoms, though he still has the same anaemic, cachectic appearance. Discharged him to out-ward department.

April 28.—Has re-entered the wards, having had another attack of vomiting, with aggravated dyspeptic symptoms.

Ordered him milk diet, and a mixture containing tinct. ferri chlorid., tinct. gentian. comp., and infusion of columbo.

May 4.—There has been no vomiting for the last three or four days, but he is rapidly emaciating. Pulse 84, of fair volume. Tympanitic percussion continues throughout his abdomen, except over a small area midway between ensiform cartilage and umbilicus, and rather a little to the right of the median line. Palpation discovers an uncertain hardening above the umbilicus.

May 5.—Died this morning.

Post-mortem examination, five hours after death.—Body exceedingly emaciated, the skin being drawn tense over the bones; skin of a dark sallow color. On opening the abdominal cavity, the mesenteric glands were found very much enlarged. Pancreas healthy, as also the stomach's cardiac and pyloric extremities. Stomach was greatly distended by gas, and its upper surface, especially to the right, was firmly matted to the under surface of the liver. There was no gall-bladder found, but its place was occupied by a large cavity, which was bounded by the posterior surface of the stomach and under surface of the liver, this organ being destroyed to a considerable extent. The cavity contained some fluid, and small cheesy lumps. The wall between it and the stomach was very thin. The

intestines were healthy. The specimen was supposed to be one of cancerous disease of the gall-bladder.

Dr. J. C. WILSON presented a specimen of *aneurism of the abdominal aorta*.

J. J., æt. 24, a muscular, well-developed negro man, by occupation a waiter, was seen for the first time in the evening of April 23. He was suffering intense abdominal pain, which he stated to be paroxysmal and to have been present only six or seven days, but not severe enough to interfere with his work until the day before I saw him. The focus of this pain was in the epigastrium; it was also referred to the lumbar region and to the left chest posteriorly. It was aggravated by lying on either side, was unaffected by cough or deep inspiration; there was slight general tenderness of the abdomen. The bowels were somewhat constipated, tongue covered with a thick whitish fur. The patient had no desire for food, and no vomiting after taking it.

No thrill or marked pulsation was observed in palpatting the belly. Pulse 60, rather tense. No cardiac murmur. The patient stated that he had occasionally had similar attacks, but that they had never before been so severe. The hypodermic use of morphia allayed his suffering. The next day he had less pain, and rose, having taken, at his own request, a bottle of the solution of citrate of magnesia, which purged him gently.

On the morning of April 25, after a night of great suffering, he sank suddenly and died.

The diagnosis had not been made out. After his death, it was ascertained from his friends that he had suffered for some months pain in his belly, but had never given up work on account of it. He often spoke of having strained himself in lifting, and associated the pain with that fact. He had had malaria, and had, some few years ago, venereal sores, followed by a single suppurating bubo. There was no history of constitutional syphilis. *Sectio cadaveris* revealed at once the cause of death. The peritoneal cavity was filled with fresh blood-clots. This blood had escaped from a longitudinal rent in the wall of a sacculated aneurism of the abdominal aorta, situated opposite the lower dorsal and upper lumbar vertebrae, and between the crura of the diaphragm. The opening in the wall of the artery was about one inch and a quarter in length, and was opposite the twelfth dorsal vertebra; the tumor itself was three inches and three-fourths long and two inches wide, and was developed anteriorly and upward, so that a portion of the right pleura was adherent to its upper extremity. Its long diameter corresponded with the course of the aorta, and its middle point was opposite the eleventh dorsal vertebra. The trunk of the cardiac artery and the superior mesenteric were given off from the sac, which in its upper part was occupied by a moderately firm clot the size of a hen's egg. The heart was hypertrophied; there was some bloody serum in both pleural cavities. The remaining viscera were blanched from loss of blood, but otherwise healthy. As the aneurism was developed anteriorly, there was no erosion of the bodies of the vertebrae. Some old inflammatory adhesions existed between the peritoneal covering of the tumor and that of the stomach. No atheromatous patches were to be seen upon the thoracic aorta; the valves of the heart were normal. There were, however, to be observed near the seat of the aneurism small, faintly-marked patches, showing slight local change in the middle coat and in the deep layers of the inner coat of the aorta, —probably commencing atheroma.

It may be not without interest to the members of the Society to state that this specimen has been kept since April 25 in a solution of hydrate of chloral, gr. xii and $\frac{3}{4}$, as recommended by Dr. Keen. The preservation is in every way most excellent as to texture, color,

and the absence of any trace of the odor of decomposition.

Dr. H. LENOX HODGE exhibited the head and neck of the femur, removed by excision,—the head found separated from the neck by ulceration. The patient is a delicate, pale, emaciated lad, 7 years old. About four months ago he fell, but was able to walk about that day. The next day he was obliged to remain in bed. An abscess formed, and discharged behind the great trochanter. The limb became shortened, and the inclination of the pelvis very marked. The knee is partially ankylosed, but there was a remarkable degree of motion at the hip for a case of arthritis. Excision was done at the Children's Hospital, May 6, and the head of the femur was found entirely separated from the neck, and lying in a pocket in the gluteal muscles above the great trochanter. The neck pressed against the acetabulum, and in the excision was removed as usual below the trochanters. This separation of the head by ulceration is rare, and accounts for the unusual motion at the hip prior to the operation. The case is interesting also on account of the short period in which this extensive destruction of bone appears to have resulted.

Dr. J. E. MEARS inquired of the condition of the acetabulum. He thought it a question whether the force of the injury might not have been spent upon the neck of the femur, and thus have been the exciting cause of the inflammation.

Dr. HODGE replied that the acetabulum was sound, except at the lower part of the rim. He had no doubt but that the inflammation set in on account of the injury. The physician who first examined the case treated it throughout as a fracture.

Dr. JOHN ASHURST, Jr., said that this case appeared to have been one of the variety which systematic writers called *femoral coxalgia*,—i.e., a case in which the disease originated in the extremity of the femur rather than in either the synovial membrane or the acetabulum. It was, he believed, in such cases that separation of the femoral head was most apt to occur, the destructive process affecting chiefly the neck of the bone, which was unprotected by cartilage; whereas in the form of hip-disease known as *articular coxalgia* the head of the femur might be almost completely disintegrated, while the remnant yet remained firmly attached to the shaft.

Dr. WHARTON SINKLER presented a specimen of *extensive atheroma of the circle of Willis and other cerebral arteries*. The patient from whom it was removed was a man 47 years of age, single, who for some years had been employed in the post-office as letter-carrier and clerk. For twelve years he had served in the British army in India, and during the late war he was in the United States army. He had always enjoyed good health, and was temperate in the use of tobacco and liquor. He had never suffered from any constitutional malady.

There was no cardiac disease, nor were there any atheromatous changes in the radials.

About three years ago he had an attack of left hemiplegia. The paralysis was not absolutely complete, he being able to move slightly the hand and foot, and in about six months was able to return to light work. He could walk fairly well at the end of this time, could use the arm to some extent, and there was no contraction of the flexors on the paralyzed side.

For several months he continued to improve. Once, however, he had an attack of vertigo, which was followed by an increase of weakness for a few days.

Rather more than a year after the first attack he had a second. He did not become unconscious, but he was extremely difficult to rouse. The face was flushed, the breathing stertorous, and the speech thick. He

complained of intense pain in the head. The loss of power was on the right side, but it was not so complete as it had been on the left side in the previous attack. There was no facial palsy. It was two or three months before the patient was able to walk even a few steps. The muscular power of the limbs seemed to have returned, but the difficulty was in co-ordination. The power of locomotion in time returned to some extent, but he was never able to walk any distance, even with assistance. His gait was uncertain, and if his attention was called to anything while he was walking he was apt to fall. In fact, there was a sort of choreic condition of the limbs which was induced when voluntary effort was made, and unless he carefully observed his movements he tottered or fell.

During the next few months he had several attacks of vertigo, followed by severe pain in the head, loss of appetite, and obstinate constipation. After these attacks there was always increased difficulty in walking. For several months before death the expulsive power of the bladder became weakened, and urination was often delayed many hours.

On May 7, 1874, while sitting on the commode and endeavoring to urinate, he suddenly fell forward unconscious. He was caught, however, before striking the floor. There were no convulsive movements, but the body became rigid and the eyes were rolled up. Consciousness returned in a few minutes, but on recovering he felt as if he were choking. He could not swallow, and respiration was labored. Speech was thick and almost inarticulate. For a few days before this he had been unusually heavy and inclined to sleep most of the time. In a few hours he was able to take into the stomach some liquids; but the next day the inability to swallow returned, and the respirations became more frequent and difficult. The bladder was emptied by the catheter, and the urine examined and found to be free from albumen.

His condition from this time grew steadily worse. The surface became congested from insufficient aeration of the blood, everything that was attempted to be swallowed was regurgitated through the nose and mouth, and the patient died on May 12.

There was no increase of paralysis in the extremities, and consciousness remained almost to the last.

Post mortem forty-eight hours after death. The body was in a good state of preservation, having been kept in ice. The veins of the scalp were full. The skull was brittle, a corner breaking off when the calvarium accidentally dropped on the floor. Dura mater not unusually congested. In the superior longitudinal sinus was a firm white clot extending almost its entire length. The arachnoid was opaque over its convexity, but was more especially so at the base. A white clot occupied the right internal carotid. The vessels of the circle of Willis were enlarged and extensively atheromatous. The right middle cerebral artery was almost double the normal size, and stiffened with atheromatous changes; the left was in very much the same condition, and in the under surface of the middle lobe, where the vessel rested, was a spot of softening the size of a pigeon's egg. On section of the brain, the puncta vasculosa were prominent and some serum exuded. There was a moderate amount of fluid in the ventricles. In the left corpus striatum was a patch of softening as large as a filbert. No change in the right. In the right crus cerebri was a small spot of softening, which presented a dark color with many almost black points. A fragment of this was kindly examined by Dr. Tyson, who found only pigmented cells and no haematoiodin crystals. There were adhesions and recent lymph in the right pleura, and the base of the right lung was somewhat congested. The liver and kidneys were gorged with blood, but otherwise healthy.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, APRIL 8, 1874.

DR. WM. H. CRAIG, President *pro tem.*, in the chair.

DR. CHARLES DEVOL reported the following case of *abscess within the cranium, resulting from inflammation of the inner ear:*

R. H., æt. 34, Scotchman, mechanic, had been subject to frequent attacks of violent pain in the right ear for several years past. Ten days prior to death he had a severe attack, which demanded active treatment for its relief. The patient had violent chills, which came on at irregular intervals, followed by coma, for four days before death.

Excepting these attacks, he was seemingly healthy. Autopsy, 24 hours after death. Rigor mortis marked. Body rather emaciated.

Encephalon.—Left hemisphere congested throughout; lateral ventricles distended with clear serum. The surface of the right hemisphere was covered with thick greenish-yellow pus, in quantities sufficient to compress it considerably. The base of the brain was not involved, nor did the inflammation extend much into the sulci. Gray matter on section of a greenish-brown tinge.

On the right side, between the dura mater and petrous portion of the temporal bone, was a small quantity of pus, limited to a space two inches in diameter. The dura mater was discolored, but not perforated. This communicated with the internal ear, which was filled with pus. The tympanum was destroyed.

Thorax.—Lungs normal, excepting hypostatic congestion. Old adhesions of pleural surface throughout the right side, extending to the diaphragm. Heart healthy. Pericardium contained three fluidounces of clear serum.

Abdomen.—Kidneys showed recent congestion, very marked; the blood oozing profusely on section, and the tissue of a dark-red color, otherwise healthy; spleen normal; liver somewhat enlarged, with rounded edges.

The other organs were in a normal state.

Dr. DEVOL said that, if possible, a careful diagnosis should be made in diseases of the internal ear: cases with acute local pain, with delirium and chilliness, indicate participation of intracranial tissues in the disease. He recommended a careful examination of the meatus auditorius. If pus escaped, it might be from the internal ear. The bones may be carious, and the semicircular canal may be destroyed; and ulceration, inflammation, and suppuration may exist in the cranium, involving dura mater or brain, or both.

Dr. VANDERVEER presented the pathological specimen of Dr. Devol's case, and exhibited that portion of the dura mater diseased by contact with pus. This disease of the ear was supposed to have existed for four years. There was entire destruction of the small bones of the ear, also of the semicircular canal. The mastoid cells were implicated.

Dr. J. B. STONEHOUSE asked the experience of the Society,—whether they had noticed a preference for abscesses following otorrhœa on the right side of the cranium.

Dr. E. H. DAVIS narrated the following cases:

He was consulted by a farmer, who complained of having taken cold in his left ear. There were earache, and tenderness, and swelling, with obstructed hearing. He prescribed remedies calculated to relieve, and did not hear from his patient for three or four weeks, when he was called to see him. The patient could not hear, and suffered much from pain back of the ear, which continued until suppuration took place and discharged freely. A portion of the temporal bone became detached

from the surrounding bones some weeks after. He lived for about four months after this; his appetite remained good, and he was comfortable a part of the time. The loose bone never exfoliated; the patient became comatose, and died. The disease was on the left side.

Another very similar case had since occurred in his practice, of inflammation and suppuration of the left ear preceded by moderate earache; the integuments inflamed; abscess formed, which, being incised, discharged freely; and large pieces of bone were exfoliated during the next two years, when he finally recovered, and his hearing was restored.

Dr. CHARLES DEVOL inquired how great a destruction of surface in case of burns was necessary to prove fatal.

Dr. JAMES S. BAILEY said that he had met with a great number of cases of burns in the Southern States, where it was not uncommon in clearing land, in burning brush, for negro women's dresses to take fire, and, before they could be extinguished, for them to be burned severely. He had also seen several fatal cases since living in Albany. According to his experience, in cases where one-eighth of the surface was burned, especially if upon the abdomen and chest, death had ensued. He detailed the case of a child who had died in twenty-four hours from shock; also a case of an adult, who had survived the shock, and seemingly had a good prospect for recovery, but died between the third and fourth month, from exhaustion. When asked the course of treatment pursued, he said he stimulated until reaction had taken place; then supported, and used externally carbolic acid, with glycerin and water.

Dr. DEVOL said that his patients, after being severely burned, had complained of feeling intensely cold, and asked the reason for this.

Dr. VANDERVEER attributed this to nervous shock. He then referred to the shock from surgical operations. He spoke of a case of amputation of the arm, when, in the absence of anaesthetics, he had operated, and the patient afterwards spoke of only the intense pain in cutting through the skin. When the large nerve-trunks were separated with the knife, it only caused a sudden nervous shock. He had used very successfully, as a local dressing for burns, a mixture of equal parts of lime-water and olive oil, with four drops of carbolic acid to the ounce, and had, in the latter stages, resorted to skin-grafting where large surfaces of the cuticle had been destroyed.

Dr. BALCH related a case, as coming under his observation during his service in the New York Hospital, of a man who fell in a vat, scalding both lower limbs below the knees. As an external dressing he had used Carron oil, pencilling the edges with a solution of nitrate of silver, and washing the limb occasionally with tepid water.

He had treated a similar accident during his service in the Brooklyn Hospital in the same manner; both recovered.

Dr. CURTIS said that he had seen the Lister's bandage used in a very extensive burn of the lower extremity, in the General Hospital at Vienna. This consisted of a paste containing carbolic acid, which was spread on tinfoil and the surface kept constantly covered with it. The large wound granulated evenly under this; the surface being painted once in two or three days with a rather weak solution of nitrate of silver.

In the case of a ballet-dancer whose body was so extensively burned that no hope of recovery was entertained, great relief was afforded by immersion of the body entirely under water,—the appliances for which are very perfect in Hebra's wards. This is the general treatment there in such cases.

Dr. DEVOL was well pleased with a mixture of glycerin, yolk of egg, and butter of cacao, equal parts: it was bland, and excluded the air effectually.

GLEANINGS FROM OUR EXCHANGES.

THE TREATMENT OF PHthisis BY THE PHOSPHATE OF LIME AND THE JUICE OF RAW MEAT (*The Lancet*, June 13, 1874).—Dr. Henry Blanc has found by extended experience that in severe cases of phthisis no remedies are more valuable than the juice of raw meat and the phosphate of lime, when they are administered in a form suitable to the patient and to the disease. The syrup of lacto-phosphate of lime is well tolerated at first, but after a while induces dyspepsia, nausea, and somnolence. The solution of chlorhydro-phosphate is not grateful to the patient, but it is well tolerated by those who overcome their dislike to the rough acid taste of the drug, and has given very good results. Under whatever form the phosphate of lime may be prescribed, it should always be taken at meals.

The meat-juice should be prepared in the following manner: A pound to a pound and a half of fresh beef, deprived of fat, bones, etc., is placed over a quick fire for a few minutes, in order to whiten and harden the external surface only; the piece of meat is then cut into two or three pieces corresponding to the size of the meat-press, and all the juice is extracted by the pressure of the powerful screw. The superficial coction is necessary to overcome the elasticity of the meat, which renders the extraction of the juice a very difficult matter unless more powerful machines be used than the simple one at present required. A pound and a half of good fresh meat gives a teacupful of juice. The juice should be prepared daily. This juice, having all the physical properties of raw meat, is easily digested, is well tolerated, and, served in the following manner, is always very grateful to the patient. The juice should be mixed with equal parts of tepid broth, made of bones, and flavored with salt and pepper, and to which tapioca, vermicelli, etc., can be added. Care, however, should be taken that the broth is never more than tepid, otherwise coagulation takes place, and the desired effect is not obtained.

The treatment of the consumptive patient by this method is the following: Early morning, warm milk (not boiled), with bread and butter, and, if the appetite be good, some fat bacon and eggs. At eleven or twelve o'clock, breakfast, before which a drachm of the syrup of triple phosphate should be taken; during the meal itself, a dose of the muriatic phosphate of lime, and half of the daily allowance of the raw meat juice in some broth. The meal should consist, according to appetite and digestive powers, of fish or poultry, or white meats, fresh vegetables, and a few glasses of good alcoholic wine. Dinner at six o'clock on the same principles; broth, with the remainder of the raw meat juice, and, instead of the triple phosphate, a dessert-spoonful of cod-liver oil can be taken with advantage after the meal, if the liver be not enlarged and fatty, and the digestion good. The muriatic solution, or wine of phosphate of lime, should also be taken during the dinner. At night, before retiring to rest, a cupful of warm fresh milk, diluted one-third with Vichy water.

No medicines whatsoever, beyond those mentioned, should be administered, unless some special indications or some urgent symptoms claim their use. Anodynes, narcotics, cough-mixtures, lozenges, blisters, inhalations, etc., are practically of no good, and but too often, by lessening the appetite or by irritating the patient, they increase the debility and hasten the fatal end. All hygienic rules—out-of-door exercise, ablution of the skin, etc.—should at the same time be carefully attended to. Under the influence of this treatment the appetite rapidly returns, the cough becomes less troublesome, the expectoration lessens, the night-sweats and all unfavorable symptoms decline and disappear, the patient gains flesh

and strength, and the confirmed and helpless invalid, with proper care and prudence, can enjoy life once more.

MISCELLANY.

"27th July, 1844.

"A FEW days ago Sir William Hamilton was struck with palsy, and, though he should survive, is practically gone. . . . He is an excellent, laborious, and learned man; a great sounder of intellectual depths. His learning, indeed, is vast, and was hourly amassing. An indistinct utterance, an awkward, bashful manner, with a look of apparent sullenness, and a taste for abstruse profundity, prevented his being practically a first-rate teacher or lecturer. The art of oral instruction seems singularly difficult. It is by no means implied in a complete command of the subject, even when this is joined to considerable power of speaking or of writing. A great lecturer, besides these, must be precise, yet not dry; lucid, but not superficial; animated, but not declamatory; and, above all other qualifications, he must be familiar with all the depths and shallows of his hearers' mind in reference to his language, and to the matter to be taught; so as to avoid the common and fatal error of pursuing his own thoughts, while they have no thoughts to pursue, and of driving or soaring, while they, if awake, are staring at him from the flat earth. No mistake is more usual than that of supposing that the power of acquiring and that of communicating knowledge is the same, and that the lecturer evincing the one must evince the other. And even knowledge is not all that a truly good lecturer has to teach. He has to teach the art of acquiring knowledge, the art of acquiring the habits and the powers of acquisition."—*Times and Gazette*, June 6, 1874.

ERBWURST.—It is stated that the Prussian government is building, at Mayence, a factory for the production of the famous military sausage. If the results are satisfactory, an establishment of the kind is to be erected for every *corps d'armée*. The works will be able to supply 55,000 men, and will contain steam flour-mills, bake-houses, slaughter-houses, etc., etc. The steam flour-mills will turn out 7000 cwt. of flour daily, and there is sufficient accommodation in the house, with its kneading-machines and continuous ovens, for manufacturing this quantity of flour into bread. The slaughter-house is large enough to slaughter and deliver, ready for manufacture into food, 170 oxen daily, or at least 1000 per week, to the prepared-food department, which, besides this, will manufacture prepared vegetables. Forage rations for the horses of an army of the size named will also be supplied by the works. The opening of the establishment is fixed for about the beginning of 1875.

It is stated that horses, dogs, etc., may be freed from the annoyance of flies by smearing them with a little

empyreumatic oil of juniper, using it especially on the ears and other more exposed portions.

PROFESSOR KUSSMAUL, of Freiburg, has been invited to succeed Professor Lebert, at Breslau, who is about to retire; but he has declined the invitation.

IT is stated that the negotiations with Von Recklinghausen for Rokitansky's chair have been again broken off,—this time, it is believed, finally.

THE MILLENNIUM.—The *Scientific American* believes the time will come when ice will be made in all our large cities for a dollar a ton.

NOTES AND QUERIES.

DEATH FROM AN OVERDOSE OF HYDRATE OF CHLORAL.
To THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DRAR SIR.—I enclose for you the following item, to be used if you desire:

Dr. I. J. Meals, of Mill Creek, Huntingdon County, Pennsylvania, died on the night of the 19th inst. from an overdose of chloral hydrate. He was in the habit of taking a portion of a solution he had prepared for his use at night to induce rest and sleep. Feeling badly, he took more than usual (the number of grains cannot be determined). He was so far restored that he was able to sit up and converse after about four hours of effort to restore him; but there was still a tendency to relapse into a stupor. He became suddenly worse, and died, seemingly from paralysis of the heart, within five hours.

Yours, very truly,

A. B. BRUNNAUH.

HUNTINGDON, PENNA., June 26, 1874.

OFFICIAL LIST

**OF CHANGES OF STATIONS AND DUTIES OF OFFICERS
OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM
JUNE 30 TO JULY 6, 1874, INCLUSIVE.**

SIMONS, JAMES, SURGEON AND MEDICAL DIRECTOR.—Granted leave of absence for thirty days from 25th inst., on account of sickness. S. O. 100, Department of the Gulf, June 29, 1874.

FRANTZ, J. H., SURGEON.—Granted leave of absence for four months, on Surgeon's Certificate of Disability. S. O. 141, A. G. O., June 29, 1874.

BROWN, J. M., ASSISTANT-SURGEON.—To report in person to Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 144, A. G. O., July 2, 1874.

HUBBARD, V. B., ASSISTANT-SURGEON.—During temporary absence of Surgeon Simons, in addition to his other duties, to discharge those of Medical Director at these Headquarters. S. O. 100, c. s., Department of the Gulf.

KINSMAN, J. H., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Abercrombie, Dakota Territory. S. O. 136, Department of Dakota, June 29, 1874.

DE WITT, C., ASSISTANT-SURGEON.—Assigned to duty at Fort Macon, North Carolina. S. O. 103, c. s., Department of the South.

LAUDERDALE, J. V., ASSISTANT-SURGEON.—To report in person to Commanding General, Department of the Missouri, for assignment to duty. S. O. 144, c. s., A. G. O.

LORING, L. V., ASSISTANT-SURGEON.—To report in person to Commanding General, Department of Arizona, for assignment to duty. S. O. 144, c. s., A. G. O.

WHISLER, D., ASSISTANT-SURGEON.—Granted leave of absence for twenty days. S. O. 103, Department of the South, June 29, 1874.

DICKSON, J. M., ASSISTANT-SURGEON.—Granted leave of absence for two months, with permission to apply for an extension of two months. S. O. 144, c. s., A. G. O.

HARVEY, P. F., ASSISTANT-SURGEON.—To report in person to Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 144, c. s., A. G. O.